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10/556,806	10/02/2006	Thomas Johansson	150-312	1473

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BROWN, JANELLE CLELIA

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/556,806

**Applicant(s)**

JOHANSSON ET AL.

**Examiner**

JANELLE C. BROWN

**Art Unit**

4137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-54 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 10/2/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This action is responsive to the preliminary amendment filed on October 2, 2006. Claims 26-50 are pending. It is noted preliminary amendment filed 11/14/2005 was not entered as per notice of missing parts mailed on 8/29/2006. Notice of missing parts appeared to indicate that claims in pre-amendment should begin numbering at 26. Applicant's subsequent preliminary amendment complied with this requirement. However, a review of the record reveals that claims 1-29 were originally submitted with the application necessitating re-numbering of the claims in the amendment filed on 10/2/2006. Since the amendment of 10/2/2006 requested the cancellation of claims 1-25 only, claims 26-29 remain pending in the case. However, since it appears to have been applicant's intention to cancel these claims, they have not been treated on the merits. Claims 26 and 49 are independent claims.

#### ***Claim Objections***

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 26-50 been renumbered 30-54.

***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter "the third and the fourth optical fibers" (claim 35, lines 10-11). See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Please insert —a—before "third optical fibers"(claim 35, line 8). Also, the claimed subject matter "the third optical fiber" (claim 42, line 1) and "third longitudinal translatable element" (claim 52, lines 1-2) do not have proper antecedent basis.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 35 -38 and 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim subject matter "third and fourth optical fibers" (claim 35, lines 10-11) is not adequately supported in the original disclosure.

Claim 42 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; more specifically the claim subject matter. The phrase "the

third optical fiber second ends" (claim 42, lines 1-2) is not clear; to which group of fibers does the "third optical fiber belongs? For the purpose of examination the recited claim subject matter was interpreted as *the third optical fiber of the second plurality of optical fibers*.

Claim 42 recites the limitation "the third optical fiber second ends" in lines 1-2.

There is insufficient antecedent basis for this limitation in the claim.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 30 and 53 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 28 and 50 respectively of copending Application No. 10/556,919. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 30 and

53 of present application is anticipated by claims 28 and 50 respectively of copending application No. 10/556,919 since claims 28 and 50 of copending application are narrower in scope than claims 30 and 53 of present application. Furthermore, the difference between claims 30 and 53 of the present application and claims 28 and 50 of the copending application lies in the fact that the copending application No. 10/556,919 claims include many more elements and is thus much more specific. Thus the invention of claims 28 and 50 of the copending application are in effect a "species" of the "generic" invention of claims 30 and 53. It has been held that the generic invention is "anticipated" by the "species". See *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993). .

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim 35 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 7,037,325 to Svanberg et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 35 of present application is anticipated by claim 1 of U.S. Patent 7,037,325.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 30-32, 41-42, 44, 46, 47-51, and 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/02060366 to Svanberg and in view of U.S. Patent 4,669,467 to Willett et al (Willett).

Concerning claim 30, Svanberg, drawn to a therapy and diagnosis system and method with distribution of radiation, teaches: **a system for interactive interstitial photodynamic or photothermal tumor therapy or tumor diagnosis of a human, comprising:**

- **at least one first light source (9a) for emission of light within the wavelength-range of infrared (IR), visible or ultraviolet light** (page 5, claim 4);
- **at least one light detector** (radiation sensor)(12)(Figs. 1 and 2), **for detection of light** (paragraph 29, lines 9-12);
- **and a plurality of optical fibers** (radiation conductors)(6)(Fig. 5) **adapted to conduct light to or from a tumor site at or in said human, wherein the optical fiber is in use employed as a transmitter or a receiver for conduction of light to or from the tumor site for therapy or diagnosis of a tumor at the tumor site** (page 4, lines 4-8).

However, Svanberg fails to teach **one distributor adapted to distribute the light..... light source or the light detector.**

Willett, drawn to a mode mixer for a laser catheter, teaches

- **one distributor adapted to distribute the light from the first light source to the tumor site** (Willett, col. 9, lines 5-8),

- **wherein the distributor** (mechanical translator)(200)(Fig. 19) **comprises at least one longitudinal translatable element** (mechanical clamp or glass slides) **having a plurality of the optical fibers attached** (col. 17, lines 18-21) **and being arranged in such a manner that light is coupled in different constellations to or from the optical fibers for a diagnostic or therapeutic mode of the systems** (col. 13, lines 24-26 and 30-33) **by longitudinal translatable movement of the longitudinal translatable element between pre-determined positions for aligning the optical fibers** (col. 17, lines 37-40) **with a corresponding coupling element for transmitting or receiving light to or from the light detector** (photodiode)(45)(Figs. 12A and B, 19, and 20) (col. 17, lines 60-63). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the device of Willett into the device of Svanberg to provide an alternate method of allowing the "selection of the optical fiber" (Willett, col. 9, lines 1-4).

Concerning claim 31, Svanberg teaches **one second light source** (9b) **for emission of therapeutic light through at least one of the optical fibers via the distributor via the longitudinal translatable element and the corresponding opposing coupling element to the tumor site** (paragraph 29, lines 12-15).



Concerning claim 32, Svanberg teaches

- **a plurality of first optical fibers arranged for conducting light to or from the tumor site** (paragraph 22, lines 1-3),
- **a plurality of second optical fibers arranged for delivering light from at least one light source or transmission of light to the at least one light detector** (paragraph 29, lines 9-12 and paragraph 33, lines 8-9), and
- **distributor is a distributor for distribution of light from one light source to the tumor site and/or from the tumor site to the least one light detector** (paragraph 1, lines 5-8),

However, Svanberg fails to teach **the opposing coupling element is a second longitudinal translatory element, and being arranged in such a manner that light is coupled in different constellations by translatory movement of a first if the translatory elements between pre-determined positions relative to the other the translatory elements.**

Willet's mode mixer teaches **the opposing coupling element (coupler)(46)(Willet)(Fig. 1) is a second longitudinal translatory element (col. 8, lines 31-32), and being arranged in such a manner that light is coupled in different constellations by translatory movement of a first if the translatory elements between pre-determined positions relative to the other the translatory elements** (Willet col. 17, lines 28-31). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to

incorporate the device of Willett into the device of Svanberg to produce a "fiber selector system" (Willett, col. 17, lines 11-12).

Concerning claims 39 and 40, Svanberg teaches a light source comprising a beamsplitter (page 5, claim 5) and **the light fiber** (radiation conductor) **is arranged between a dichroic beam splitter and the light detector** (radiation sensor) (page 5, claim 6). However Svanberg fails to teach a **diagnostic light source**.

Willett's mode mixer for a laser catheter teaches a **diagnostic light source** (95)(Willett, Fig. 21) (employing optical fibers and spectroscopic methods to diagnose) (Willett, col. 19, lines 6-9 and lines 13-31). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the device of Willett into the device of Svanberg to "diagnose in situ plaque deposits" (Willett, col. 19, lines 6-9).

Concerning claim 41, Svanberg teaches **fluorescence is recorded through the same optical fiber as the one transmitting light to the tumor site** (page 5, claim 13).

Concerning claim 42, Svanberg teaches "the first radiation conductors second ends are treated by a material with temperature sensitive fluorescence emission" (Svanberg, claim 7). However, Svanberg fails to teach **the third optical fiber second ends**. However, it would have been obvious to one of ordinary skill at the time of the invention to apply a known technique (**treating by a temperature sensitive material**) of Svanberg to a known device (**optical fiber**

**ends**) to "measure the concentration of the sensitizer sequentially" (Svanberg, paragraph 42, lines 4-7).

Concerning claim 44, Svanberg teaches **the therapeutic light source (9b) is a light source for coherent light of a single fixed wavelength (630nm)** (Svanberg, paragraph 29, lines 12-15, paragraph 45, lines 7-14, page 5, claim 10).

Concerning claim 46, Svanberg teaches **one or several of the optical fibers which are treated with the material with a temperature sensitive fluorescence emission are in use measuring the temperature at the tumor site, the light which is sent to the tumor site in use is heating the tumor site, and the intensity of the light is controllable by the measured temperature in order to regulate the temperature of the tumor site at the individual optical fibers** (page 5, claims 7 and 14, paragraph 42, lines 4-7, and paragraph 43, lines 11-18).

Concerning claim 47, Svanberg fails to teach **longitudinal translatory displacement element is an optical sledge**.

However, Willett's mode mixer teaches **translatory displacement element (200)(mechanical translator)(Figs. 19 and 20) is an optical sledge** since the optical fibers ( in a linear array are mounted on mechanical translator moveable in translatory directions (Willett, col. 17, lines 13-23, and col. 18, lines 35-38). Therefore it would have been obvious to one of ordinary skill in the art at

the time of the invention to incorporate the device of Willett into the device of Svanberg to establish "a fiber selector system" (Willett, col. 17, lines 11-12).

Concerning claim 48, Svanberg fails to teach **one stepping motor or at least one servo system moves said elements of said light distributor relative each other.**

Willett's mode mixer device teaches **one stepping motor** (motor) (204) (Willett, Fig. 19) **moves said elements of a light distributor** (mechanical translator) (200) (Willett, Fig. 19) **relative each other** (Willett, col. 17, lines 27-31). However, Willett fails to explicitly teach a **stepping motor with light distributor** (mechanical translator) (200) (Willett, Fig. 19). In alternate embodiment, Willett teaches a **stepping motor** (102) (Willett, Fig. 20). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a **stepping motor** as a simple substitution of one known element (motor) for another to obtain predictable results.

Concerning claim 49, Svanberg **teaches the operation modes are modes of the system comprised in the list of: interactive interstitial photodynamic tumor therapy, photothermal tumor therapy using hyperthermia, and tumor diagnostics, whereby these operation modes in use are alternated during the same occasion of treatment of the tumor site** (page 5, claim 17).

Concerning claim 50, Svanberg teaches **the operation modes comprise a diagnostic operation mode a therapeutic operation mode, transmitting**

**diagnostic light to the site and the remaining first optical fibers are coupled to a light detector** (Svanberg, claim 15, lines 1-7), **and the therapeutic light sources are coupled to the first optical fibers transmitting therapeutic light to the site** (Svanberg, paragraph 29, lines 12-15). However, Svanberg fails to teach **one diagnostic light source is coupled via a first longitudinal translatory element**. Willett's mode mixer device teaches **one diagnostic light source is coupled via a first longitudinal translatory element (coupler)**(46) (Willett, Fig. 19) **to the first optical fibers transmitting diagnostic light to the site and the remaining first optical fibers are coupled to a light detector** (64) (Willett, col. 9, lines 8-15 and col. 19, lines 24-31). Therefore, using the rational in claim 30 above, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the device of Willett into the device of Svanberg.

Concerning claim 51, Svanberg fails to teach a turnable disc in an optical distributor **switches between the operating modes** (Svanberg, page 5, claim 16). However, Svanberg fails to teach **one second longitudinal translatory element**.

Willett's mode mixer teaches using a mechanical translator (200) (Willett, Fig. 19) **(one second longitudinal translatory element)** or a rotary system consisting of a holder (108) (Willett, Fig. 12A and 12B) (Svanberg's optical distributor). Therefore it would have been obvious to one of ordinary skill in the art at to incorporate the device of Willett into the device of Svanberg as an

alternative to couple laser light into the optical fibers (Willett, col. 18, lines 35-39 and lines 44-49).

Concerning claim 53, Svanberg teaches a **method for interactive interstitial photodynamic tumor therapy of photothermal tumor therapy or diagnosis of a human, wherein at least one light detector and a plurality of optical fibers are connected to a tumor site and the optical fibers are used as a transmitter or a receiver for conduction of light to or from a tumor site for diagnosis and therapy of a tumor at the tumor site, wherein switching between tumor therapy and tumor diagnostics is achieved in an automated way by switching light fibers between constellations** (using a turnable disc, page 4, claim 1, lines 41-42) and that **the results from the diagnostics control the therapy process by regulating a therapeutical light intensity depending on the results of the diagnostics until an optimal treatment of the tumor site is achieved** (page 5, claim 15 and paragraph 46, lines 1-3). However, Svanberg fails to teach **switching light fibers between constellations by means of a light distributor comprised of one longitudinal translatory element**.

Willett's mode mixer device teaches **switching light fibers between constellations** (changing the area of optical fibers) (Willett, col. 13, lines 24-29) **by means of a light distributor comprised comprised of one longitudinal translatory element** (see claim 30 above). Therefore, using the rationale in

claim 30, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the device of Willett into the device of Svanberg.

Concerning claim 54, Svanberg teaches **alternatingly utilizing interactive interstitial photodynamic tumor therapy, photothermal tumor therapy using hyperthermia, and tumor diagnostics during the same occasion of treatment of said tumor site** (page 5, claim 17).

Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/02060366 to Svanberg in view of U.S. Patent 4,669,467 to Willett et al (Willett), as applied to claims 30 and 32 above, and in further view of U.S. Patent 4,496,211 to Daniel.

Concerning claims 33 and 34, Svanberg fails to teach **each translatory element has holes arranged for receiving the optical fibers and that corresponding holes on the two translatory elements are equidistantly arranged on a straight line, and the translatory elements are configured for transmitting light between the translatory elements.**

Willett's mode mixer device teaches a **translatory element** (mechanical clamp) **has holes arranged for receiving said optical fibers** (col. 17, lines 18-21) **and that corresponding holes on the translatory element is equidistantly arranged on a straight line**, using the preferred embodiment of evenly spacing the optical fibers on the holder (Willett, col. 17, lines 14-21 and col. 18, lines 57-60). Using the rationale provided in claims 30 and 32, it would

have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the device of Willett into the device of Svanberg.

However, Svanberg as modified by Willett fails to **each translatory element** (a second translatory element), **the translatory elements are configured for transmitting light between the translatory elements, and the first and second optical fibers are connectable to each other in different constellations through the longitudinal translatory movement between pre-determined positions of the longitudinal translatory displacement element and the second translatory element relative each other.**

Daniel, drawn to a lightpipe network with optical devices for distributing electromagnetic radiation, teaches plural movable elements (**each translatory element/second translatory element**) **and the translatory elements are configured for transmitting light between the translatory elements** (moveable elements have one or more channels that switch the flow between successive pairs of output lines) **and the first and second optical fibers are connectable to each other in different constellations through the longitudinal translatory movement between pre-determined positions of the longitudinal translatory displacement element and the second translatory element relative each other.**(coupled to move together in a prearranged pattern) (Daniel, col. 24, lines 47-50). Therefore I would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the device of Daniel into the device of Svanberg as modified by Willett "to establish



another variation of a lightpipe switch, a complex lightpipe switch" (Daniel, col. 24, lines 33-36, 38-42, and 47-50).

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/02060366 to Svanberg in view of U.S. Patent 4,669,467 to Willett et al (Willett), as applied to claim 30 above, and in further view of U.S. Patent Application Publication 2001/0055462 to Seibel.

Concerning claim 45, Svanberg and Willett fails to teach **the distributor comprises means for locking the light distributor into pre-determined transversal positions.**

However, Seibel, drawn to a medical imaging, diagnosis and therapy, single optical fiber system, teaches **the distributor** (electromechanical actuators) **comprises means for locking the light distributor** (light guide) **into pre-determined transversal and/or azimuthal positions** (paragraph 13, lines 1-4 and paragraph 27). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to cause the conveyed light to scan the region of interest (Seibel, paragraph 2, lines 2-3, and paragraph 11).

Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/02060366 to Svanberg in view of U.S. Patent 4,669,467 to Willett et al (Willett), as applied to claim 51 above, and in further view of U.S. Patent 4,496,211 to Daniel.

Concerning claim 52, Svanberg fails to teach **a third longitudinal translatory element is configured to switch between a plurality of optical fibers from the second longitudinal translatory element to said light detector.**

Willett's mode mixer teaches a **second longitudinal translatory element is configured to switch between a plurality of optical fibers a light detector.** However, Willett fails to teach **a third longitudinal translatory element.**

Daniel's lightpipe network with optical devices for distributing electromagnetic radiation teaches stacking linear switches to form a flat complex switching grid and a complex lightpipe switch may have plural moveable elements (Daniel, col. 24, lines 38-39 and col. 24, lines 47-50). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to "employ many variations of lightpipe switches" (Daniel, col. 24, line 11).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. 6,711,322 to Kohda et al teaches an optical switch, optical-fiber-arraying-member, production method thereof, and arraying method of optical fibers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JANELLE C. BROWN whose telephone number is (571)270-1440. The examiner can normally be reached on M-F 8:30am -5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jackson can be reached on 571.272.4697. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. C. B./  
Examiner, Art Unit 4137  
July 31, 2009

/Gary Jackson/  
Supervisory Patent Examiner  
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